THE ALBERTA FOOD PROCESSING INDUSTRY STUDY SUMMARY REPORT

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SUMMARY REPORT

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Prepared for:

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Prepared by:

Acres Consulting

Services Ltd.

PREFACE

The study of the Alberta Food Processing Industry, aimed at examining the growth potential of the industry, determining research analysis requirements to assist its growth and, constraint factors impeding its progress, was undertaken in April of 1972. Throughout the course of the study, close contact was maintained with officials of the Department of Agriculture to ensure that the research efforts were coordinated with other related work in progress.

During the course of the study, research activities were undertaken by the Department in the areas of livestock and red meat export market opportunities, food manufacturing and processing opportunities, and vegetable processing expansion plans and possibilities. Care was taken to channel the research efforts of this study away from other areas of investigation and thus avoid duplication of effort.

Acres' work could not have been undertaken without the co-operation of representatives of industry, Government and agencies and organizations related to the food processing industry. This assistance and co-operation is gratefully acknowledged. However, the material presented is the responsibility of the consultant.

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1. PURPOSE OF THE STUDY

The objectives of the study were to examine the food processing industry and determine which segments of the industry have the most significant growth potential and which areas would be most responsive to the development efforts of government. Delineation of indepth analysis required in connection with particular opportunities was to be presented. Factors which would either inhibit or constrain the growth of the industry were to be isolated, assessed, and areas of research delineated.

2. METHODOLOGY

Stage (1) The first stage of the study consisted of a brief analysis of statistical material readily available from conventional sources. This analysis, undertaken at the Standard Industrial Classification 3 Digit level, made an assessment of the present state of the Food and Beverage Industrial Group and isolated growth trends in individual categories.

The purpose of the statistical analysis was to segregate the industrial classification into two segments:

Group I. Those food and beverage industry categories which either had limited growth potential or could be expected to grow in direct proportion to population and income growth.

Group II. Those industry categories with significant growth potential which would be responsive to the development efforts of government.

Stage (1) -- Continued

Group I	Group II
Fish Products	Slaughtering and Meat Packing
Flour Mills	Poultry Products
Breakfast Cereals	Dairy Factories and Cheese
Bakeries	Vegetable Canning and Preserving
Sugar Refining	Pet Food
Soft Drinks	Biscuits and Confectionary
Breweries	Vegetable Oil
	Distilleries and Wineries
	Miscellaneous Foods

A Stage I report was reviewed with the client, and The Food Processing Industry Advisory Committee. Concurrence was arrived at in terms of the segregation of industrial categories, and the relative intensity of research effort which was to be devoted to individual categories for the purpose of this study.

Stage (2) To check conclusions which had been arrived at through preliminary investigation, Acres staff engaged in field research. This activity involved personal interview contact with senior representatives of industry, Government and organizations related to the food processing industry.

Stage (2) -- Continued

The purpose of this contact work was to gather information from knowledgeable people concerning the industrial category to which the individual respondant was related. A structured interview procedure was used with efforts made to gather information on not only the industry's development potential, but also on constraints and impediments to growth, and research and product development needs.

(A list of contacts and the interview outline appears in the Appendix).

3. PRODUCT AND INDUSTRY SPECIFIC AREAS

In summarizing the results of this study, a differentiation has been made between the action required in connection with individual product or specific industry subjects and the broader constraint or impediment areas, (many of which are often beyond the strict limits of the Food Processing Industry).

An important purpose of the study was to indicate what further research and/or action was required to stimulate expansion of the Food Processing Industry. The first section of the study results have a product or industry specific orientation as follows:-

3.1 Specialty Meat Products

The Alberta Meat Packing Industry is large, well established and provides an almost complete service. However one gap exists in this industry namely, the production of specialty meat products. Specialty sausage in a wide variety of types, many of them produced in conformity to ethnic receipes, are the most important products, but pickled and smoked products, loaves, pre-cooked products and other specialty items are also produced. Although there are a few relatively small firms producing specialty meat products in

3.1 Specialty Meat Products -- Continued

Alberta, the bulk of these products are being imported from British Columbia, Manitoba, eastern Canada and foreign sources.

Through market research, economic feasibility analysis and promotion, efforts should be made to encourage the expansion of the production of specialty meat products.

3.2 Turkey Products

Alberta consumption of turkey is currently about 11 pounds per capita. A small quantity (less than 600,000 pounds), is brought in from outside of Alberta while about 2.5 million pounds per year is exported, mainly to British Columbia. A challenge to the turkey processing industry lies in developing portion size, easy to prepare products which would be appealing to the consumer.

Ground turkey (turkeyburger), turkey cutlets, steaks and carved turkey parts, have all won substantial markets where they have been suitably prepared and marketed. (Effective product development and marketing of turkey products has already taken place in California).

3.2 Turkey Products -- Continued

A complete economic feasibility study of this area of potential appears warranted. New product development efforts aimed at introducing new turkey products must be supplemented with market development work. It would appear that the turkey producers could profitably work with present meat packers or poultry processing firms which have established channels of distribution.

3.3 Duck Processing

A preliminary analysis of the potential for duck production indicates that an integrated operation producing in the range of 750,000 to 1,000,000 pounds per year (based evicerated weight), should be feasible. Such an operation would market chiefly in Alberta and British Columbia and would replace imports from the United States and eastern producers.

Detailed economic feasibility work and promotional efforts are required to encourage duck processing in Alberta.

3.4 Salvage Poultry Processing

Laying hens, turkey breeding stock and turkey and chicken culls are all produced in Alberta

3.4 Salvage Poultry Processing -- Continued

in quantity. However there is a lack of processing facilities to convert these raw materials into a useable form. At present some of these products are shipped to eastern processors.

Salvage processing consists of boiling, carcass stripping (sometimes called deboning), and finally cubing of the flesh for chicken and turkey pies, chicken-a-la-king, turkey rolls and for filler products used in wiener and loaf products. Residual fats and bouillons are sold for flavouring and other industrial uses.

Economic feasibility investigations are required to determine the requirements for a carcass stripping and deboning facility in Alberta.

3.5 Bakery Mix Products

The bakery industry consumes substantial quantities of dairy products, many of them in the form of formulated mixes. These mixes contain milk powder, processed whey products, vegetable oils, sugar, preservatives, etc. Mixes have replaced simple components such as fluid or powdered milk in much of the bakery industry and thus Alberta dairy firms have lost a large portion of their bakery

3.6 Greenhouse Industry -- Continued

Significant greenhouse industry expansion depends on improved technology. Because of the development potential, continuing attention should be focused on research efforts aimed at the technology and the efficiency of production in the greenhouse industry.

3.7 Potatoes and Potato Products

The past 15 years have witnessed a marked improvement in the quality and quantity of potato production in Alberta. Significant penetration has been made in export markets for table potatoes, and substantial expansion and diversification in the production of processed potato products has taken place.

Although the processing of table potatoes for the domestic market and for export from the province has made noteworthy gains, the market potential for Alberta table potatoes has not been fully realized. Continuing assistance in the area of market development is required to enable this important area of vegetable processing to expand further.

Alberta produces high quality potatoes which are well suited for processing into chips and french

3.7 Potatoes and Potato Products -- Continued

fries. Both of these items are now produced in the province, but there is an opportunity to expand this production even further.

Three major firms, which command a substantial proportion of the market for frozen french fried potatoes in Canada, do not have production capacity in Alberta. Appropriate agencies should endeavour to attract a major firm, with national marketing connections to the province.

In addition, continued effort should be made to encourage local potato chip production facilities to expand or to attract new potato chip processors to the province.

Continued work in the area of new product development, and research into processing technology related to the varieties of potatoes grown in Alberta is required to improve processing techniques and increase efficiency.

3.8 Soup Production

The establishment of soup production facilities in Alberta would be an attractive addition to the food processing complex. Soup production would provide a market for by-product production of the vegetable

3.8 Soup Production -- Continued

processing industry and an attractive outlet for products from the meat packing and poultry industry.

A detailed review of the essential requirements of a soup production facility should be undertaken and contact made with major producers.

3.9 Distillery Capacity

Alberta is in a fortunate position with respect to the supply of the important raw materials and supplies used in distillery operations. Not only does this include the agricultural products required but also the glass containers and packaging materials which are available locally.

Significant expansion in the distillery industry has taken place in southern Alberta during this past year, affording local producers the opportunity of supplying corn for distillery purposes. Efforts are required to co-ordinate and assist producers in developing this new crop. The development of distillery corn production could have an important effect in attracting other distillery firms to the province of Alberta to capitalize on this resource.

3.9 Distillery Capacity -- Continued

Promotion efforts directed towards the expansion of distillery capacity in the province should be continued.

3.10 Dairy Industry

The key requirement to the expansion of dairy products consumption is product and process development work aimed at introduction of new products which utilize dairy production. Most of the new products of this type are merely substitutes for other products, and therefore their successful introduction counters a severe competitive situation.

New products such as puddings, ice milk, milk based drinks which would be competitive with acid sugar based carbonated beverages should be considered through product development research.

The opportunity to expand powdered milk production in the province should be investigated through market research.

Current cheese prices and the shortfall in Alberta production with respect to imports of cheddar cheese and specialty cheese products in

3.10 Dairy Industry -- Continued

the province makes this a vitally important area for expansion of production. Currently Alberta's consumption of cheese is approximately 6 times its output.

The potential returns to processing facilities and the linkages to producers are of considerable significance. Also of importance is the fact that cheese production facilities are likely to be established in smaller urban centres thus contributing to the diversification of manufacturing activity.

Vigorous promotion of the expansion of cheddar cheese and specialty cheese production and marketing should take place.

3.11 Vegetable Processing

The vegetable processing industry, which is located in southern Alberta, has a continuing interest in expanding its product line and extending its processing season. To expand its product line the industry requires vegetable varieties which are amenable to either canning or freezing. The firms presently in operation have expressed an interest in

3.11 Vegetable Processing -- Continued

processing vegetables such as asparagus, mushrooms, cauliflower and broccoli and dehydrating products such as onions.

Continued research assistance will be required to enable producers to raise varieties of crops which are suitable for canning or freezing. On-going attention should be paid to the vegetable processing industry to encourage both producers and processors to widen their product range.

3.12 Honey

The world honey market is affected by production fluctuations in major supply areas. Recently Alberta has encountered strong export demand as a consequence of poor crops in parts of Europe and South America. This development has put an upward pressure on prices, reduced stocks and stimulated expansion of production.

Export markets in Japan, the E.C.M. and U.S.A. are served by Alberta producers in addition to the Canadian domestic market. Two areas of research activity would be beneficial to Alberta producers. First, the development of containers which are suited to moving quantities of honey to tidewater for trans-

3.12 Honey -- Continued

shipment to offshore markets would increase the efficiency of transport and increase returns to the producer.

Secondly, efforts should be made to process and package more honey in Alberta. To accomplish this, market investigation and packaging research is required. The development of export markets for individual service portions of honey and attractive family packages would upgrade the value of the product before it leaves the province.

3.13 Vegetable Oil

Edible vegetable oil is produced in Alberta by one plant located in Lethbridge which is the largest in western Canada. The oil produced is sold in regional, national and international markets.

There has been a continuing interest in many areas of the province to establish vegetable oil production facilities. Interest usually emanates from oilseed producing groups which are eager to find an outlet for their production.

3.13 Vegetable Oil -- Continued

Because of the potential which this industry has for expansion, a constant review of the factors affecting the economics of vegetable oil production, (with emphasis on freight rates), is of importance.

3.14 Export Potential For Pork Products and Poultry

The slaughtering and meat packing industry and to a lesser extent, the poultry products industry, have an export potential which has been attracting the interest of Government and industry. The potential volumes of the export markets are extremely signficant. The impact which penetration of these markets could have, not only on the processing industry but also on the producer, makes market development work in this area a matter of considerable importance.

Of particular interest from a product point of view are the export market potentials in the Pacific Rim countries for pork and pork products.

Although the prevailing prices for poultry products militate against their competing in more distant markets, continued attention to their export potential should be maintained in

3.14 Export Potential For Pork Products and Poultry -- Continued

the interest of capitalizing on the production cost advantages which exist in the province.

3.15 Custom Packaging

Technological changes in packaging are proceeding at such a pace that many firms find they cannot justify the capital costs involved in introducing specialized packaging equipment. Therefore a need has developed for the custom packaging firm which can serve the needs of many clients and thus justify the capital costs involved in specialized equipment. To date, custom packaging facilities have tended to concentrate in eastern Canada, with some limited development taking place in British Columbia.

Because many food products are being packaged in convenience type containers, Alberta producers are denied an opportunity to enter this market unless they have access to custom packaging facilities.

Efforts should be made to have a custom packaging facility establish operations in the province because of its importance to the growth and development of the food processing industry.

4. CONSTRAINTS, IMPEDIMENTS OR PROBLEM AREAS

Expansion of certain segments of the food processing industry is deterred because of impeding factors which often are outside of the control of the individual firms within the industry. Development efforts of Government, often working in close co-operation with the private sector, can have a positive effect in finding solutions to problems or removing constraints which presently deter expansion.

Constraints, impediments or problem areas affecting growth were identified as follows:

4.1 Transportation Costs

Transportation charges which must be incurred to reach the large market centres in eastern Canada and the lucrative export markets via tidewater ports militate against many Alberta manufacturers, with the food processing group being no exception.

The freight barrier is a particular problem in connection with the penetration of the Japanese market for fresh and frozen meats and other food products. The presently prevailing high level of freight costs derives in large part from the

4.1 Transportation Costs -- Continued

lack of organization, and exchange of information among food product producers.

Government action should be aimed at coordinating the activities of trading companies, brokerage firms and producers of products such as potatoes, vegetables, honey, meats, with a view to working out the logistics of arranging pool shipments and reducing freight costs.

A study should be undertaken to evaluate the present and potential volumes of fresh and frozen produce moving from Alberta to Japan and other oriental destinations. Priority attention should be given to this matter, since the resolution of the freight cost impediment could have far reaching implications on the food processing industry.

Continued attention should also be given to air freight costs since they represent a potential means of serving the Pacific Rim market. Air freight becomes considerably more attractive if arrangements can be made to back haul products from the area of destination.

4.2 Marketing Restrictions

With minor exceptions the Alberta Dairy industry is precluded from making interprovincial shipments of fluid milk because of marketing restrictions. Restrictions on interprovincial shipments of fluid milk are not in the interests of Alberta producers who appear to have a long range competitive advantage in production costs. Efforts to reduce or eliminate interprovincial marketing restrictions would be desirable, as these barriers stifle the dairy industry's future expansion potential.

The present operations of the Alberta Hog Marketing Board are potentially in conflict with the development of long term contracts which are required by major Japanese trading companies when selling in that market.

As they relate to long term export contracts, the operations of the Alberta Hog Marketing Board should be examined, the benefits of its operations assessed, and the need for modification in this operation, (if any), be determined.

4.3 Capital Requirements

Expansion of the food processing industry will afford the agricultural community opportunities

4.3 Capital Requirements -- Continued

to supply raw material requirements such as livestock, vegetable products and field crops. However a constraint facing the producer is the availability of long term capital to finance increases in output.

A detailed analysis of the capital requirements of producers is warranted in order that financing mechanisms may be devised which will enable producers to respond to the supply opportunities which will be available to them.

4.4 Sewage Treatment

Food processing industries characteristically tend to produce substantial volumes of effluent containing heavy loads of substances such as blood, animal waste, animal fats, starches, potato and vegetable refuse, vegetable oils and chemicals including sodium hydroxide. These materials are produced in large quantities and typically require costly sewage treatment facilities.

In centers such as Red Deer, Brooks, Taber and Lethbridge such industrial wastes make up a large proportion of all sewage requiring treatment. As a result smaller urban centers

4.4 Sewage Treatment -- Continued

with large industrial loads and relatively new services tend to have higher sewage treatment costs charged against food processing industries than do the larger cities.

This situation could have a discouraging effect on the development of food industries in general and in particular it could adversely affect the smaller centers where the resource base would normally attract this type of industrial development. The problem particularly affects the meat industry, poultry industry, vegetable industry, and dairy products industry which are oriented towards locating outside of the major urban concentrations.

The extent of significance of the problem in Alberta has only lightly been examined to date, and a full examination is required.

4.5 Livestock Supply

The most significant expansion prospects for the food processing industry are found in the slaughtering and meat packing sector. Because of its size and linkages to the agricultural industry, this segment of the food processing

4.5 Livestock Supply -- Continued

industry warrants special attention.

The historical performance of the slaughtering and meat packing industry would indicate that this industry will continue to expand its productive capabilities commensurate with market growth. It would appear moreover that a considerable opportunity exists for future growth of slaughtering and meat packing activity in smaller centers close to the source of livestock supply.

Without development effort an increase output of about 25 percent in the next decade would appear probable. The full potential of growth in the decade is approximately 100 percent of the present level of output. The expansion gap between 25 percent and 100 percent can be expressed as a difference in value shipments (current dollars) of $300 million and about 25,000 man years of employment. Full development by 1982 would require marketing approximately 1 million more head of cattle over the current annual level of 1,147,000 head and 2 million more hogs per year over the present production of 2,552,000.

The constraint on the full development potential would appear to be a supply constraint. In

4.5 Livestock Supply -- Continued

particular the following are areas of concern:

- researching resource utilization to determine least costs solutions to increasing beef and cattle production

- determining capital requirements of livestock producers

- reviewing of the relative rewards to farmers from producing sheep and cattle

- evaluating the economics of dry lot cow-calf operations

- examining the manure disposal problem for hog, cattle and dairying operations; this may represent either a significant environmental problem or else a severe cost constraint on the producer.

4.6 Trading Companies

International trading companies from the orient, particularly Japan, are currently investigating

4.6 Trading Companies -- Continued

the purchase of meat products, honey and other food products in Alberta. In the absence of Canadian trading companies, the foreign trading companies are dealing with individual suppliers or loose knit groups of suppliers.

An investigation into the merits of establishing Canadian trading companies to deal in food products with Japanese and other oriental collective buying organizations warrants attention. Canadian trading companies oriented to two and three way trade could purchase food products in Alberta on an occasional or continuing basis for sale in Japan and other oriental markets.

4.7 Improved Communications

Throughout the food processing industry there is a need for improved communication between the producer and the processor or manufacturer. Information exchange should be fostered. Packers and processors are often doubtful about future supply and producers are doubtful about future markets.

4.7 Improved Communications -- Continued

Government can play an important role as a calalyst in improving these channels of communication.

4.8 New Product Research

There is an evident need for new product development to take place in many areas in the food processing industry in the province. However, few firms have laboratory facilities other than those which are used for quality control. In part, this is a consequence of some firms being very small scale or in some instances, because firms are branch operations of larger concerns which are headquartered elsewhere. The basic costs of establishing laboratory facilities and retaining research assistance appears to be the main impediment.

Already in existence are several sources of research assistance in provincial government departments, the Research Council of Alberta, and Federal and University research groups. (The University of Alberta Food Science Department has research units serving the Alberta Potato Growers and The Alberta Dairymen's Association).

4.8 New Product Research - - Continued

For a product research undertaking to be fruitful, it must meet the needs of individual firms in the food processing industry. These needs should be determined.

In consultation with research groups and industry, an assessment should be made of existing research capabilities,and expansion requirements. A determination of how a product research delivery system can most effectively be structured and financed should then be made.

5. APPENDIX

Contacts Interviewed

Mr. Walter Berry
General Manager
Alberta Poultry Marketers Co-operative Ltd.
7727 - 127 Avenue
Edmonton, Alberta
Phone #476-6261

Mr. Donald K. Bigelow
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Freshwater Fish Marketing Corporation
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Mr. R.P. Dixon
Product Development Commissioner
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Mr. W.C. Gordon
Livestock Commissioner
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Contacts Interviewed -- Continued

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Mr. H.J. Hargrave
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Mr. Larry Jorgenson
Alberta Potato Commission
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Phone #262-4247

Mr. Hugh Michael
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Lethbridge, Alberta
Phone #327-5781

Contacts Interviewed -- Continued

Mr. G.R. Milne
Poultry Commissioner
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Mr. W. McBride
General Manager
Northern Alberta Dairy Pool Ltd.
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Mr. J. Nicholson
Manager
Sun Alta Potato Processors Ltd.
Taber, Alberta
Phone #223-3506

Mr. Wm. Pearson
Manager
Labatt's Alberta Brewery Ltd.
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Edmonton, Alberta
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Contacts Interviewed -- Continued

Mr. N.A. Don Potter
Secretary-Manager
Alberta Broiler Growers' Marketing Board
Alberta Turkey Growers' Marketing Board
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Mr. Bruce Robertson
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Mr. W.A. Smith
Victus Consultants Ltd.
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Mr. Garth Stone
Potato Specialist
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Winnipeg 1, Manitoba

Contacts Interviewed -- Continued

Mr. R. Tolton
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Meat Packers Council of Canada
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Mr. Harold Vosburgh
Manager
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Lethbridge, Alberta
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Mr. Wm. Wiles
Plant Manager
Burns Foods Ltd.
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In addition interviews were conducted with 5 individuals closely associated with the food industry who preferred that their identity not be revealed.

5. APPENDIX

Interview Technique

Interviews were of two types; general and particular. General interviews were conducted with senior executives in the meat packing industry, the vegetable industry, the dairy industry, etc. and with senior government personnel. Particular interviews were conducted to obtain specific comment and specific information on certain points such as freight rates.

The general interviews commenced with a brief review of the position of a specific firm in an industry or, in the case of government personnel, the views of a senior officer of government concerning a particular industry. The following interview format was used:-

The nature of the operation of the firm.
Products and by-products produced.
Geographic location of branch plants, ownership and control.
Source of raw materials - supply factors
- quantity
- quality
- seasonal price

Interview Technique -- Continued

Markets for production - demand factors
- geographic markets
- prices
- export outlook

Logistical factors
- freight rates
- tariffs
- regulations and controls.

Constraints or impediments to growth and expansion.